



WELCOME

Draft Action Plan Comprehensive Energy Efficiency Program for Existing Buildings Public Workshop

Tuesday, June 25, 2013
Fresno



Welcome and Agenda

Dave Ashuckian

Deputy Director
Efficiency and Renewable Energy Division
California Energy Commission



On-Site Housekeeping

- Restrooms
- Emergency Exits
- Food



Workshop Agenda

**Monday
June 24
San
Francisco**

- Data Reporting and Management
- Foundational ME&O
- Foundational Workforce Resources
- Financing Mechanisms

**Tuesday
June 25
Fresno**

- Residential Upgrades
- Energy Efficiency in Property Valuation
- Potential Mandatory Ratings and Basic Upgrades
- Standards Compliance and Enforcement

**Friday
June 28
Los
Angeles**

- Nonresidential Standardized Tools
- Small/Medium Commercial Building Upgrades
- Public Sector Leadership
- Potential Mandatory Statewide Energy Use Disclosure for Largest Commercial and Public Buildings



Next steps

- Last Draft Action Plan Workshop – Friday, June 28
- Public Comment Period Ends – Friday, July 12
- Revise Draft Action Plan – July/August
- Workshop Action Plan Gaps – July/August
- Workshop Final Action Plan – August
- Adopt Final Action Plan – Fall 2013



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Opening Comments

Andrew McAllister, Commissioner
California Energy Commission



CALIFORNIA ENERGY COMMISSION



Opening Comments

Simon Baker

California Public Utilities Commission



Energy Commission-Identified Action Plan Gaps

- Program Funding
- Multifamily Programs
- Low-Income Programs
- Plug Loads
- Cost-Effectiveness



C A L I F O R N I A E N E R G Y C O M M I S S I O N

COMPREHENSIVE ENERGY EFFICIENCY PROGRAM FOR EXISTING BUILDINGS

DRAFT ACTION PLAN OVERVIEW

Christine Collopy
California Energy Commission



What is the Comprehensive Energy Efficiency Program for Existing Buildings?

■ Calls for:

- A comprehensive program to achieve energy savings in CA's existing building stock
- A complimentary portfolio of techniques, applications, and practices
- CEC to develop and implement program in collaboration with all CPUC and other stakeholders
- Authorizes CEC to implement regulations





Comprehensive Program Elements

- Long-term, statewide approaches to achieve energy efficiency for all existing buildings
- Cost-Effective Energy Efficiency Improvements
- Public/Private Financing Options
- Public outreach and education
- Green Workforce Training
- Broad range of energy assessments, benchmarking and ratings



Program Phases

We
Are
Here

Phase I

Develop infrastructure and action plan.

Phase II

Implement strategies. Address market gaps and imbalances. Transform marketplace.

Phase III

Potentially implement mandatory requirements.



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PHASE I ARRA PROGRAMS AB 758 PILOTS





Action Plan Strategies

No Regrets

No Regrets strategies will provide the necessary foundation to support and secure the benefits of future energy efficiency programs and efforts for existing buildings

Voluntary Pathways

Voluntary Pathways are market support activities that build on past efforts

Potential Mandatory Approaches

Potential Mandatory Approaches could make the market more transparent and move mature measures into wider use



Draft Action Plan Overview

No Regrets Strategies

1. Data Reporting & Management
2. Standards Compliance & Enforcement
3. ME&O Resources
4. Workforce Resources



Draft Action Plan Overview

Voluntary Pathways

1. Residential Upgrades
2. Tools for Benchmarking, Auditing, and Retrocommissioning of Nonresidential Buildings
3. Upgrades for Small and Medium Commercial Buildings
4. Public Sector Leadership
5. Energy Efficiency in Property Valuation
6. Financing Upgrades



Draft Action Plan Overview

Potential Mandatory Approaches

1. Statewide Energy Use Disclosure for the Largest Commercial and Public Buildings
2. Disclosure of Ratings and Basic Level Energy Upgrades



Energy Commission-Identified Action Plan Gaps

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Program Phases

Phase I

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Phase II

Implement strategies. Address market gaps and imbalances. Transform marketplace.

Phase III

Potentially implement mandatory requirements.



Collaboration, Partnerships and Engagement

**Property Owners, Tenants and Other Energy
Efficiency Investment Decision Makers**

**Federal / State / Local /
Regional Governments and
Building Officials**

Utilities

**Building
Industry
Professionals**

**Real Estate
Industry
Professionals**

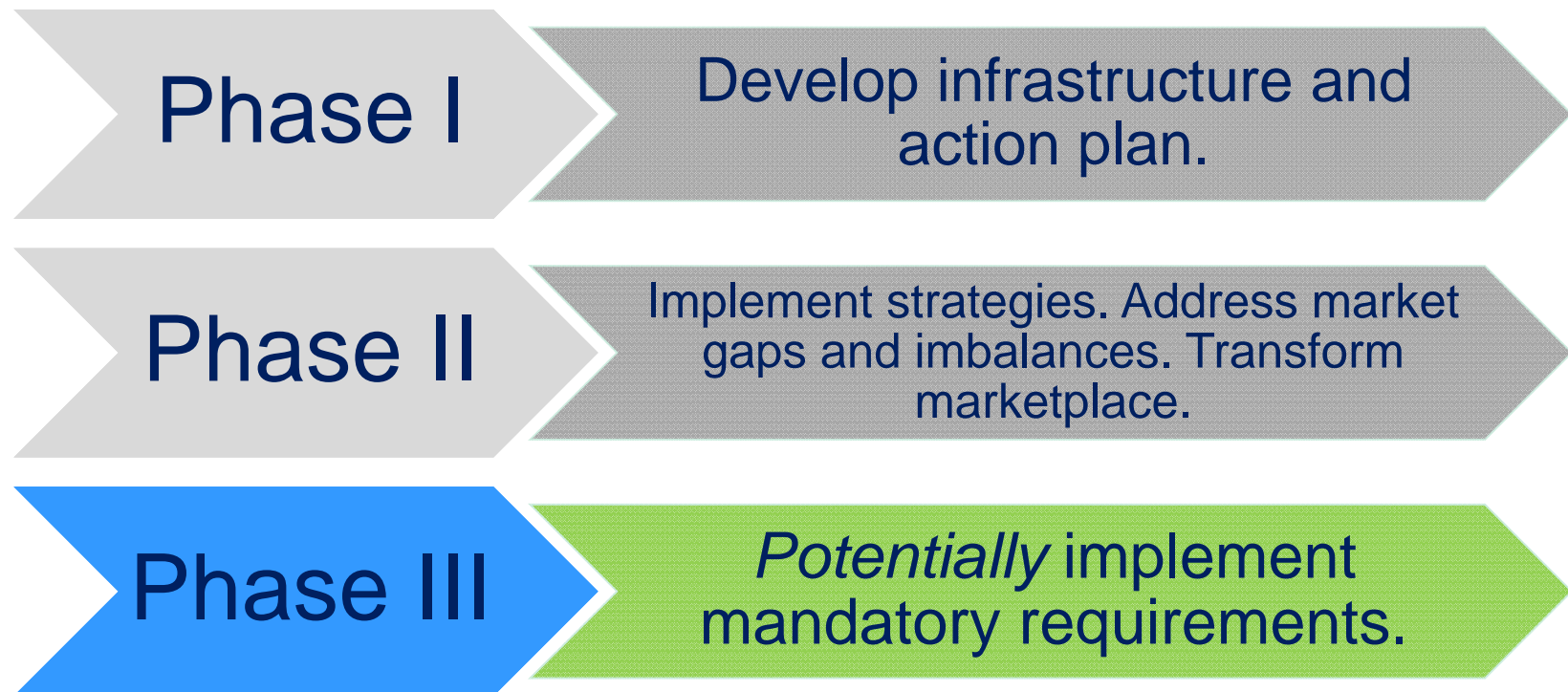
**Financing
Entities**

**Workforce /
Trainers / QA
Agents**

**Advocacy
Groups**



Program Phases





Potential Mandatory Requirements

- **PUBLICLY DISCLOSE** energy use for largest commercial and public buildings
- **DISCLOSE** energy performance **RATINGS**
- **COMPLETE** basic level energy efficiency **UPGRADES**



Comprehensive Program Oversight

- Oversight Body of Key Policy Makers and Stakeholders
 - State and Public Agencies
 - Utilities
 - Program Implementers and Administrators
 - Local and Regional Governments
 - Industry Leaders and Representatives
 - Legislative Leaders
 - Consumer Advocates
- Meet regularly to review progress and provide input
- Seek input from established groups and committees, and groups conducting research and evaluations
- Receive public input



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COMMENTS

OVERVIEW

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BREAK



VOLUNTARY PATHWAY 1

CREATE MULTIPLE PATHWAYS FOR RESIDENTIAL PROPERTY OWNERS

Christine Collopy
California Energy Commission



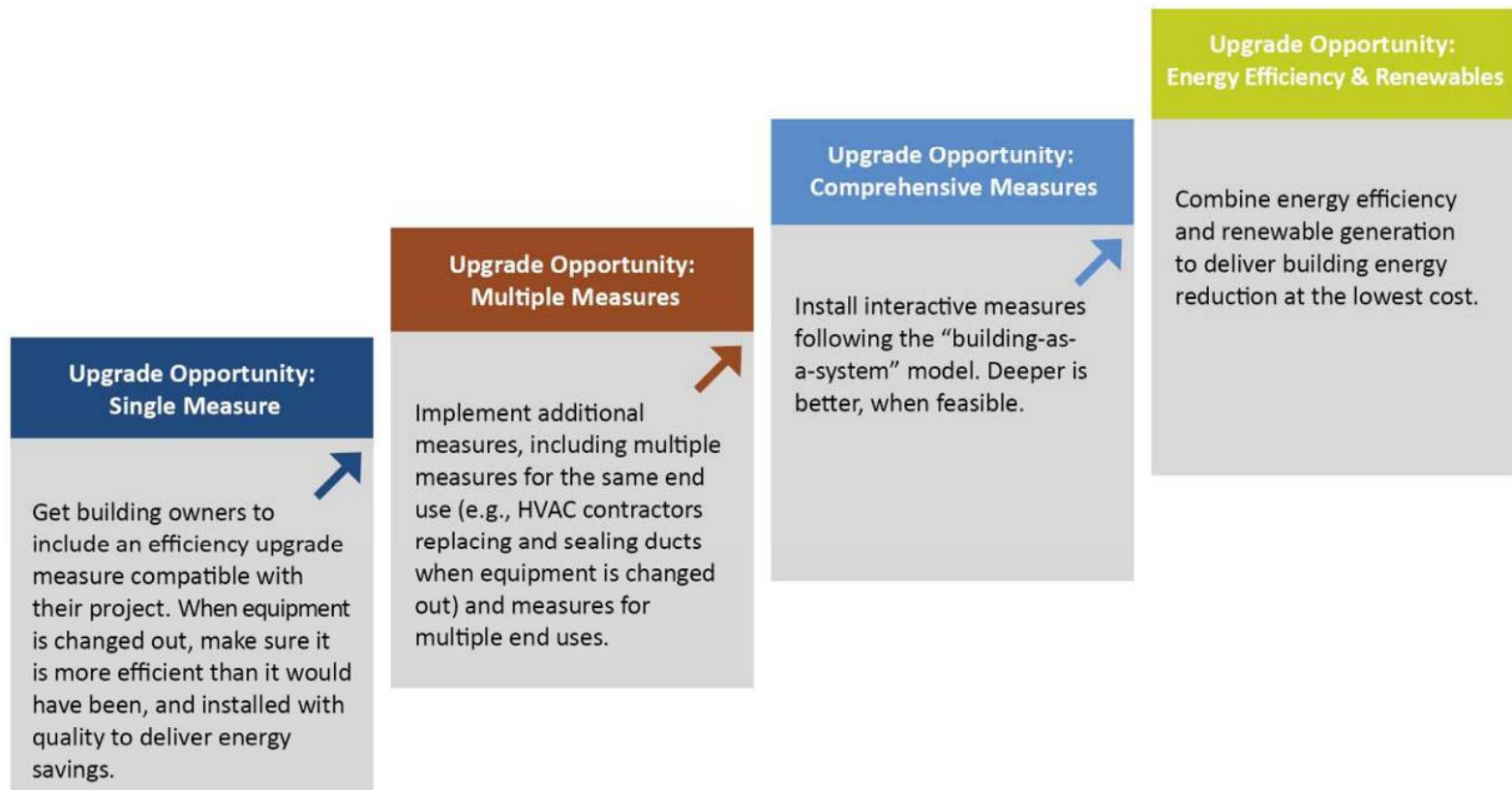
Overview

- Lessons learned from ARRA is that whole-house upgrades are not for everyone
- Broader choice of pathways for SF and MF to capture lost opportunities
- Valuable opportunities to add efficiency measures at various times during life of building
- All pathways need to comply with standards
- Partners need to harmonize program offerings, QA and ongoing evaluations



Multiple Pathways

Pathways to provide “on-ramp” for owner to pursue deeper upgrades over time





VP 1.1: Create easy access to different energy efficiency pathways for every building owner and tenant.

Key Initiatives

1. Use ARRA and IOU Whole House Upgrade Program EM&V outcomes to guide program changes, expansion, and enhancements, and to persuade building owners to make energy efficiency improvements.
2. Expand energy efficiency upgrade opportunities for those making building upgrade decisions when the decision maker is in the best position to make an energy upgrade in whole or incrementally.
3. Adapt programs to allow for multiple ways to participate in efficiency programs, including single measures, multiple measures, deep upgrades, or self-generation projects.
4. Educate contractors on all energy efficiency program offerings, including integrated demand-side-management-related activities and financing opportunities.



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VP 1.1: Create easy access to different energy efficiency pathways for every building owner and tenant.

Key Initiatives, Continued

5. Continue to revise the Energy Upgrade California Home Upgrade program and Multifamily pilots to enhance program offerings, remove barriers to building owner and tenant participation, and improve quality assurance, contractor performance, and customer satisfaction.
6. Conduct effective and minimally invasive quality assurance to provide confidence that quality improvements are installed, requirements are fulfilled, and consumer satisfaction is achieved.
7. Conduct ongoing program assessments, including collection of project data, compare predicted versus achieved savings, and report performance metrics and outcomes regularly.



COMMENTS

CREATE MULTIPLE PATHWAYS FOR RESIDENTIAL PROPERTY OWNERS

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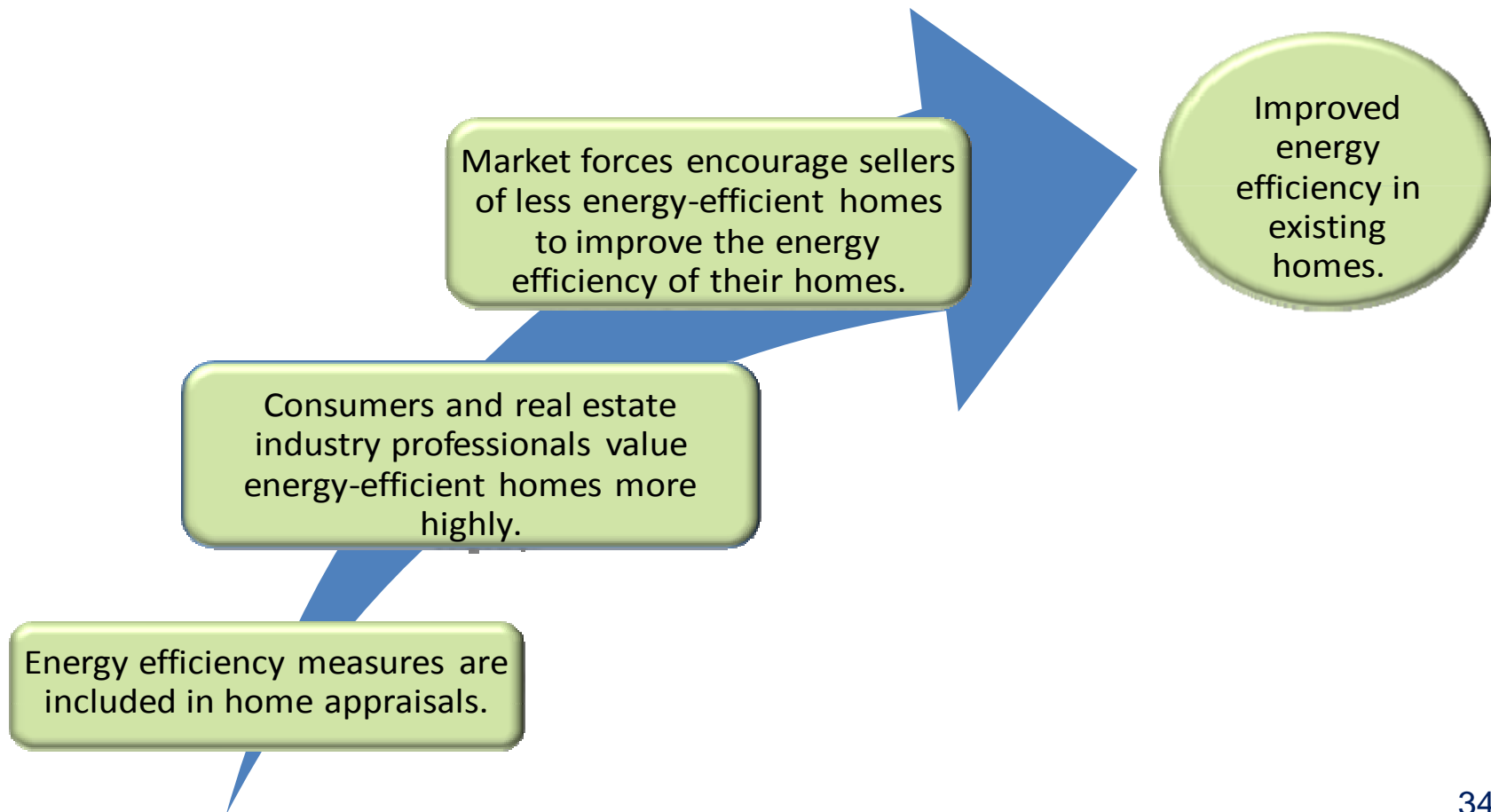
VOLUNTARY PATHWAY 5

ENERGY EFFICIENCY IN PROPERTY VALUATION

Bill Pennington
California Energy Commission



Achieve market transformation by incorporating energy efficiency performance into property valuation and appraisal processes.





Energy Efficiency Missing From Property Valuation

- Unrealized Market Opportunity
- Systematic Recognition of Energy Efficiency Upgrades as Capital Assets
- Recognize Inherent Added Value To Drive Down Energy Bills Over Building's Life
- Competitive Advantage in Functioning Market
- Reward Investment in Efficiency
- Returns Investment when Property is Sold



Cross-Compare Energy Efficiency Capital Improvements

- Systematic, Reliable, Objective Way to Measure and Rate Efficiency Assets in the Building
- Designed for Accuracy and Ease of Application
- Standardized Tools
- Widely Accepted, Understood, Integrated into Market Transactions
- Included in Property Valuation Appraisal Processes



Key Market Actors are Critical

- Actively Consult and Engage Key Market Actors in the Property Valuation Process
 - Appraisers
 - Home Inspectors
 - Commercial Bldg Inspectors
 - MLS Operators and Users
 - Lenders
 - Real Estate Agents
- Establish Approaches that Mesh Well with their needs, established transactions
- What Kinds of Information? What Formats? What Accessibility? What Works with Building Owners?
- Extensive Stakeholder Collaboration Needed



Pilot Programs

- Demonstrate Processes and Test Implementation
- Provide Incentives and Technical and Marketing Support for all Participants
- Evaluate Market Actor Perceptions and Recommendations for Improvement
- Revise Based on Feedback



VP 5.1: Achieve market transformation by incorporating energy efficiency performance into property valuation and appraisal processes.

Key Initiatives

1. Establish agreements with key market actors regarding incorporating efficiency asset values into established property market processes.
2. Conduct pilot projects in local regions to demonstrate the value of energy efficiency upgrades in conjunction with property values.
3. Provide incentives and marketing support for participants to incorporate energy efficiency upgrade information in sales, property valuation, and appraisal processes.
4. Evaluate results of pilot projects, including assessment of homeowner, contractor, and other market actors' perceptions and behavior changes.



COMMENTS

ENERGY EFFICIENCY IN PROPERTY VALUATION

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LUNCH



POTENTIAL MANDATORY APPROACH 2

DISCLOSURE OF RATINGS AND COMPLETION OF BASIC ENERGY UPGRADES

Bill Pennington
California Energy Commission



Evaluate the need for and feasibility of mandatory approaches for residential and nonresidential buildings; if such approaches are determined necessary, conduct a public proceeding to develop requirements for:

- Mandatory disclosure of energy performance ratings and
- Mandatory completion of basic level energy efficiency upgrades

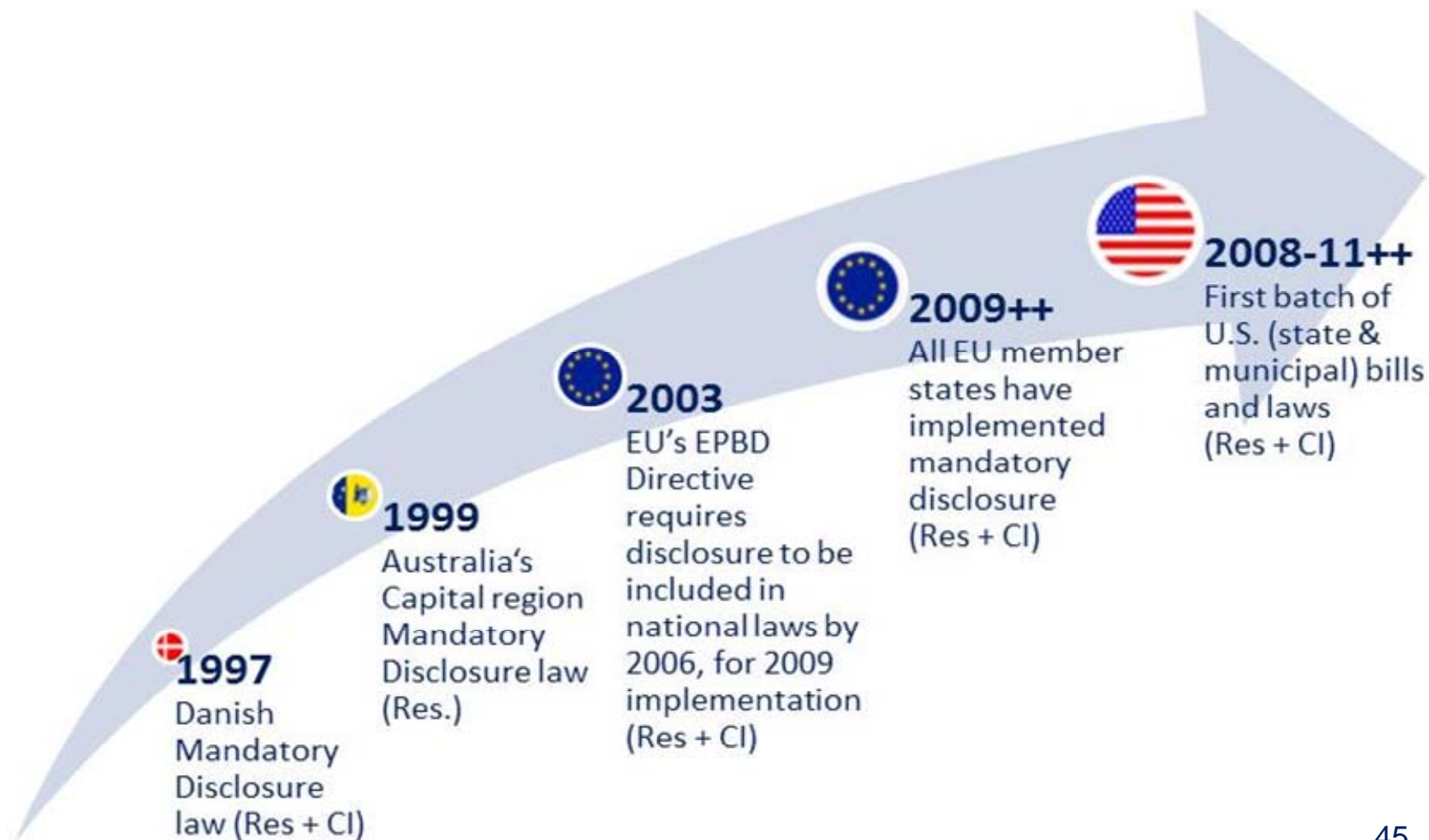


Considerations for Mandatory Approach

- Mandatory Approaches That Help Move California Beyond Voluntary Approaches Alone
- Work in Concert with Other Initiatives to Encourage Participation By Whole Population of Buildings
- Open Public Process to Evaluate Benefits, Downsides – Input from Stakeholders, Key Actors is Critical
- Mandatory Disclosure of Building Asset Ratings
 - To Work Best, Energy Efficiency of All Buildings Being Considered in a Transaction is Known for Cross-Comparison
- Mandatory Basic Energy Efficiency Upgrades
 - Prudent Measures That Serve as Common Baseline



Mandatory Approaches Around the World





“Date Certain” and “Glide Path”

- Open Public Proceeding Would Establish Mandatory Requirements to Go Into Effect on a “Date Certain”
- Establish Sufficient Lead Time for Building Owners to Choose When to Take the Required Actions
- Create a “Glide Path” for Voluntary Compliance
 - Outreach, Information, Technical Assistance
 - Financing and Incentives
 - Support Building Owners who Voluntarily Comply & Market Actors who Facilitate Compliance
 - Opportunity for Feedback and Course Correction



Trigger Points for Voluntary Action

- Great Potential for Particular Voluntary Trigger Points
 - Financial Transactions
 - Replacement of Major Equipment
 - Building Remodeling or Renovation
- Trigger Points Should be Targeted for Special Incentives, Financing, Technical & Marketing Support
- Facilitate Buildings to Accomplish “Date Certain” Requirements for Whole Population of Buildings
- Not just the Limited Number of Buildings that Would be Reached at the Trigger Points



Scope and Phasing

- Mandatory Approaches Likely to Not be Appropriate for Some Buildings
- Not Feasible to Launch for all Buildings at Once
- Scope/Phasing Special Considerations
 - Intensity of Energy Use
 - Climate – Criticality of energy/demand in that Climate on California Energy Systems
 - Building Ownership – State, Local Government, Low-income, Residential, Nonresidential
 - Feasibility of cost-effective upgrades and NEBs



Stakeholders Play Pivotal Role

- For Any Mandatory Approach to be Successful
- Key Stakeholders and Market Actors Will Need to
 - Collaborate on Plan and Communicate Plan to Constituents
 - Understand Effects Plan has on each Industry
 - Help Ensure no one Industry is Over-burdened
- Need for Buy-in from Stakeholders for Process to Become “New Normal”



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PMA 2.1: Evaluate the need for and feasibility of mandatory approaches; if such approaches are deemed necessary and feasible, conduct a public proceeding to develop requirements for disclosure of energy performance ratings on existing residential and nonresidential buildings, and consider the case for required completion of basic energy efficiency upgrades on existing buildings.

Key Initiatives

1. If mandatory approaches are deemed necessary and feasible, conduct a public process to evaluate the pros and cons of mandatory disclosure of energy performance metrics for all buildings. In the same or a separate public process, consider the cases for requiring completion of basic energy efficiency upgrades.
2. If mandatory disclosure is shown to be a useful and necessary approach, determine the extent to which the “date certain” requirements should be conditional on key factors.
3. Establish administrative structures that implement procedures to effectively facilitate, monitor, and enforce compliance with the “date certain” requirements that is well-coordinated with other marketplace structures and practices so as to minimize the burden of compliance while achieving the desired private and societal benefits.
4. Develop approaches that result in an effective “glide path” for voluntary compliance in advance of the “date certain,” supported by effective public information, financing opportunities, technical assistance, and incentives for building owners and key actors in the process who encourage and facilitate voluntary compliance.



COMMENTS

DISCLOSURE OF RATINGS AND COMPLETION OF BASIC ENERGY UPGRADES

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NO REGRETS STRATEGY 2

SUPPORT FOR STANDARDS COMPLIANCE AND ENFORCEMENT

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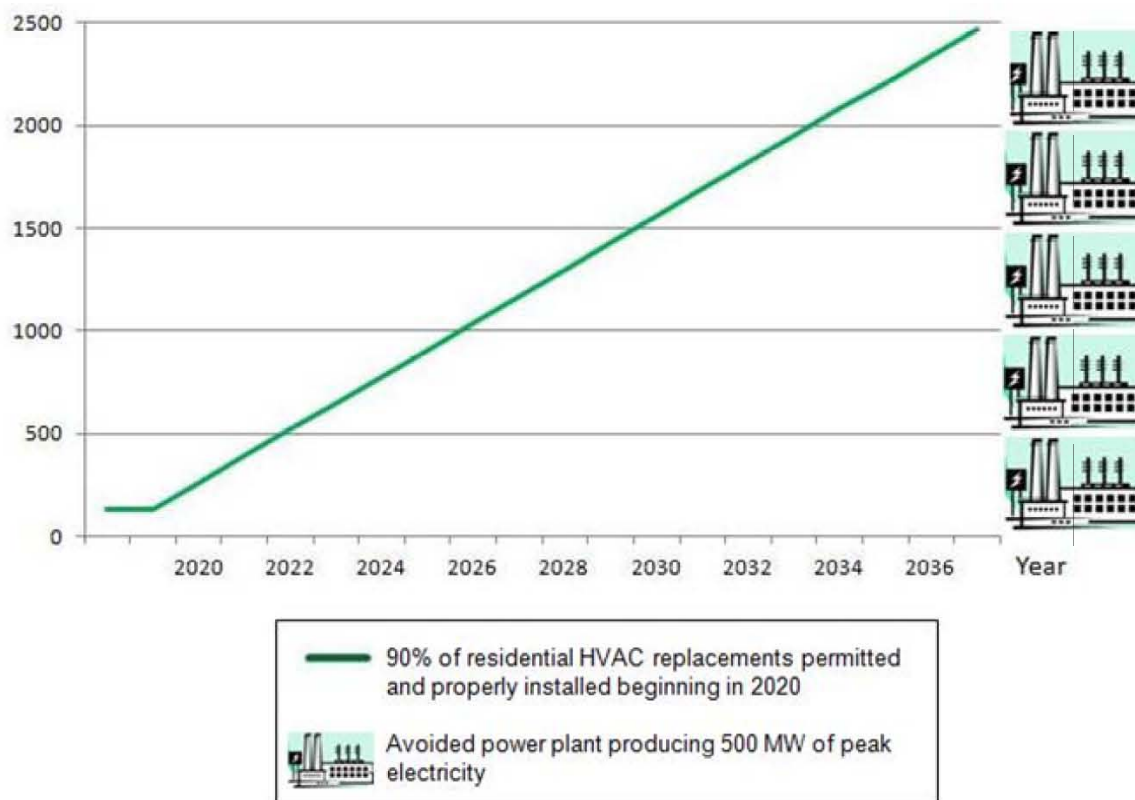
Overview

- Insufficient compliance & enforcement efforts are a major barrier to transforming the energy efficiency market.
- The current compliance process is complex and difficult to understand.
- Enforcement efforts must establish clear consequences for noncompliance and provide incentives for market actors who do comply.



HVAC Permitting

California Peak Electricity
Demand Reduction (MW)





Simplify the Process

- Stakeholders have indicated the permit process is time consuming and inconvenient.
- Sector specific training needed to improve understanding of Standards requirements
- Streamlined methods of permit pulling need to be explored





Reward Compliers, Discourage Non-Compliers

- Current process puts contractors who pull permits at a competitive disadvantage
- Incentives for compliance and clear consequences for noncompliance are both needed to improve permitting rates and achieve uniform compliance with the Standards



Complier



Non-Complier



Key Strategies

NR 2.1: Implement solutions to increase compliance with and enforcement of California's Building Energy Efficiency Standards for alterations to existing buildings.



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NR 2.1: Implement solutions to increase compliance with and enforcement of California's Building Energy Efficiency Standards for alterations to existing buildings.

Key Initiatives

1. Conduct statewide studies to understand and monitor the extent to which permits are being obtained and compliance is being achieved.
2. Develop approaches to track and determine whether specific equipment sold and installed in California complies with state and local requirements.
3. Educate and train contractors, building departments, homeowners, and other market actors on the standards for specific alterations and the cost and operational benefits of compliance. Provide permanent, ongoing training as conveniently as possible throughout the state.
4. Develop or adopt a statewide online permitting system for local building departments and contractors. Collaborate with manufacturers, distributors, and retailers to encourage contractor and consumer and consumer participation in the online permitting system and tools.



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NR 2.1: Implement solutions to increase compliance with and enforcement of California's Building Energy Efficiency Standards for alterations to existing buildings.

Key Initiatives, Continued

5. Collaborate with state and local agencies to actively enforce state building standards and establish clear consequences for noncompliance.
6. Encourage local governments to establish initiatives to improve enforcement of the state building standards and local energy and green ordinances. Provide nonmonetary incentives to market actors to increase the motivation to obtain permits and comply with current energy efficiency requirements.



COMMENTS

SUPPORT FOR STANDARDS COMPLIANCE AND ENFORCEMENT

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BREAK



Day 2

General Questions & Discussion



Day 2 Closing Remarks & Wrap-Up



Reminder: Next steps

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THANK YOU
FOR YOUR PARTICIPATION